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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/210,539	12/14/96	ISHIBASHI	A

IM22/0824

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EGWIM, K. EXAMINER

ART UNIT PAPER NUMBER
1713

DATE MAILED: 08/24/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/210,539

Applicant(s)

ISHIBASHI ET AL.

Examiner

Dr. Kelechi C. Egwim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☒ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 3/18/99 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of all documents listed that are not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The language should be clear and concise and should avoid using phrases which can be implied, such as, "Disclosure is," "The disclosure defined by this invention," etc.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 2 and 8 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to

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reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 2 newly recites an upper limit of 95% for the aliphatic polyester in the material and claim 8 recites a new lower limit of 50 part by weight of inorganic filler, based on 100 parts by weight of the aliphatic polyester. There is no previous record of a disclosure of relevance for these newly added ranges.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 2, 4-8, 10 and 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 recites "a continuous phase comprising (a) an inorganic filler and (b) at least one aliphatic polyester . . . wherein said aliphatic polyester component accounts for a proportion of not less than 50% by weight of the material", which implies that the continuous phase is a homogeneous **composite** partially composed of the inorganic filler and partially composed of the aliphatic polyester. However, the claim also recites "said inorganic filler containing aliphatic polyester continuous phase", which refer to a continuous aliphatic polyester phase with **dispersed** inorganic filler. It is unclear if applicant is claiming a continuous phase that is a homogeneous composite of the

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inorganic filler and the aliphatic polyester or a continuous aliphatic polyester phase with dispersed inorganic filler.

Claims 2, 4-8, 10 and 11 are dependent on claim 1.

8. Also, claim 5 recites "The formed article according to claim 3". Since claim 3 has been cancelled, there is insufficient antecedent basis for the limitations in this claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, 2, 4-6, 8 and 10-12 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Obuchi et al. or Tsai et al.

In col. 4, lines 13-21, col. 6, lines 41-53, and col. 9, lines 3-45, Obuchi et al. teach a variety of articles, including tying material, made from a thermoplastic composition comprising a biodegradable resin containing 25-75% of polylactic acid and 25-75% of a butylene succinate polymer. In col. 7, lines 24-34, Obuchi et al. teach the resin to further contain 0.1-70 parts of an inorganic filler such as talc. The biodegradable resin with the presently claimed composition is exemplified in preparation example 2, and example 11 of table 1, wherein the polylactic acid is described as being in the form of a pellet or powder.

In col. 1, lines 6-15, Tsai et al. teach fibers made from a biodegradable resin. In col. 4, lines 10-68 and col. 8, line 60 to col. 9, line 13, Tsai et al. teach the biodegradable resin to comprise of 0 to 100% of polylactic acid and 0 to 100% of a butylene succinate polymer, wherein, because the polymers form separate domains (phases), the polymer in the greater quantity would constitute the continuous phase and the polymer in minimized quantities would constitute the discontinuous phase dispersed within the continuous phase. In the examples, Tsai et al. teach use of "Bionolle 1020", a butylene succinate resin comprising 30% talc (See page 36, lines 18-23 of the present specifications), as the butylene succinate polymer component. The biodegradable resins with the presently claimed composition are particularly exemplified in samples 14 and 15 of Tsai et al. (See col. 19, table 3)

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While Obuchi et al. or Tsai et al. do not expressly disclosed the dispersed polylactic acid to be in the form of particles within the continuous phase of the formed article, the polylactic acid phases would intrinsically be in the form of solid particulate in the articles, given the molecular weights and the nature of the interaction between the article components. Further, while Obuchi et al. or Tsai et al. do not disclose the specific diameters of the dispersed polylactic acid, the particle diameters claimed by applicant would have been within the range of particle diameters for the dispersed polylactic acid in the prior art, given that the compositional ranges and the processes used in preparing the articles overlap in scope with the present invention. As such, the composition of Obuchi et al. or Tsai et al. are essentially the same as the claimed composition. In any event, an otherwise old composition is not patentable regardless of any new or unexpected utility or properties. See *Ex parte Lee*, 31 USPQ 2d 1105 (Bd. Pat. App. & Inter. 1993) or *In re Fitzgerald et al*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112 - § 2112.02 and § 2131.03.

Even if assuming that the prior art references do not meet the requirements of 35 U.S.C. 102, it would still have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive composition because the disclosure of the inventive subject matter appears within the generic disclosure of the prior art.

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12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Obuchi et al. or Tsai et al., each independently as applied to claims 1, 2, 4-6, 8 and 10-12 above, and further in view of Yamada et al.

Obuchi et al. or Tsai et al., above, differ from the claimed invention in that calcium carbonate is not disclosed to be an inorganic additive component. However, it is known in the art to use calcium carbonate as a species of inorganic additives for the biodegradable polyester resin of Obuchi et al. or Tsai et al., such as in Yamada et al.

In the abstract, Yamada et al. teach inorganic additives for the biodegradable polyester resins to include calcium carbonate.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use calcium carbonate as an inorganic filler/additive in the biodegradable polyester resins of Obuchi et al. or Tsai et al. because 1) Obuchi et al. or Tsai et al. teach inorganic fillers, 2) Yamada et al. teach calcium carbonate as a species of inorganic filler/additive, and 3) one having ordinary skill in the art, at the time the invention was made, would have been motivated by a reasonable expectation of success to use calcium carbonate as an inorganic filler in the biodegradable polyester resins of Obuchi et al. or Tsai et al.

Response to Arguments

13. Applicant's arguments filed 6/30/00 have been fully considered but they are not persuasive.

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14. In response to applicant's argument that Obuchi et al. or Tsai et al. fail to show an inorganic filler material contained only within a continuous aliphatic polyester phase, applicant should note that the claims do not particularly point out and distinctly claim an inorganic filler material contained within a continuous aliphatic polyester. Further, Tsai et al., at least, teach the use of the same commercially available talc-containing aliphatic polyester phase as used by applicant. (See above)

Also, while the prior art does not expressly disclose the dispersed polylactic acid to be in the form of particles within the continuous phase of the formed article, the polylactic acid would intrinsically be in the form of solid particulate, given the nature of the formed article. It is clear from the mixing processes disclosed in the prior art that the formed articles, comprising upwards of 75% aliphatic polyester, would comprise an aliphatic polyester continuous phase and separately dispersed PLA and inorganic filler, given the interaction (or lack thereof) between the components in the articles. The amount of PLA used would determine the diameter/size of the solid formed PLA dispersed phases (particles).

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kelechi C. Egwim whose telephone number is (703) 306-5701. The examiner can normally be reached on M-T (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are 305-3599 for regular communications and 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-8183.

KCE

KCE
August 22, 2000



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